WATER SUPPLY OUTLOOK

KOOTENAI RIVER BASIN

MONTANA

as of
APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The mountain snow pack accumulation last month was less than average. Presently the snow cover is 57 percent of a year ago and 79 percent average. The headwaters in British Columbia have a better snow pack than the southern area in Montana.

Low elevation snow is melting while some of the higher elevations have a good snow pack.

Streamflow during March was above average on the Kootenai. Streamflow for the next six months is forecast to average 50 to 70 percent of last year. This condition is very favorable for maintaining a lower runoff through the high water period.

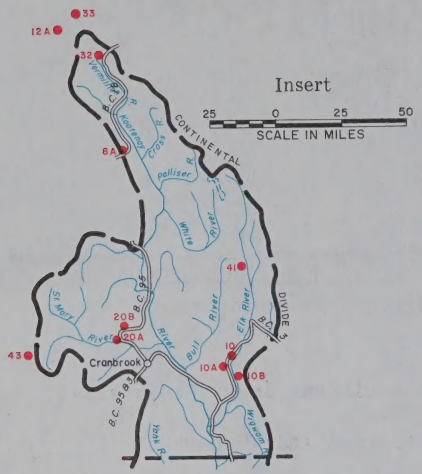
STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 3020 FISHER RIVER NEAR JENNINGS				342	264	250	440	271	486	286	210	383	274	291	257	318	162	264	302	
STATION NO. 3030 KOOTENAI RIVER AT LIBBY	9630	5952	8416	9686	7268	7359	10425	7370	9664	6855	6431	9666	7384	8688	6644	8096	7058	7820	8043	

Report prepared by
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

"The Conservation of Water begins with the Snow Survey"

KOOTENAI RIVER BASIN



LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary

See Insert

C A N A D A

I D A H O

L I N C O L N

F L A T H E A D

L I N C O L N S. W. C. D.

15A01 Rexford 3013 Eureka

14A07 14A11 14A10

U.S. 93 Yaak River Tobacco River MONT. 37 RIVER

3050 U.S. 3045 Yaak

Troy Warland

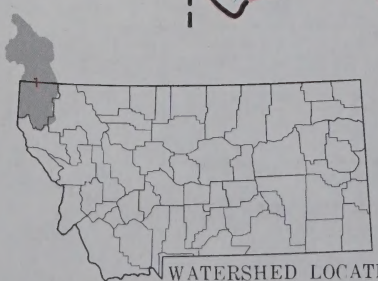
Libby 3030 KOOTENAI Fisher Creek Libby Creek

14A04 3020 Wolf

Happy Inn River 15A02 U.S. 2

15B11 15B16 15B15

10 0 10
SCALE IN MILES



SNOW SURVEY DATA

WATERSHED 1

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
15B11	Baree Creek	5500	4/1	98	40.7	59.6	50.5
15B16	Baree Midway	4600	4/1	66	27.7	48.0	-
15B15	Baree Trail	3800	4/1	0	0.0	9.4	-
14A04	Brush Creek	5000	3/29	23	8.5	15.0	14.3*
BC 10	Fernie	3500	3/29	2	1.0	10.6	9.5
BC 12A	Field	4200	3/29	22	6.0	9.9	5.4
BC 11	Glacier	4100	3/30	87	30.9	53.4	27.6
14A11	Graves Creek	4300	3/28	37	12.9	25.3	-
BC 43	Gray Creek	5100	3/30	57	15.3	26.1	19.7
BC 33	Kicking Horse	5400	3/29	58	14.5	21.3	14.8
BC 20B	Kimberley	3800	3/30	11	4.4	8.9	7.7
BC 32	Marble Canyon	5000	3/29	30	10.1	18.7	13.8
BC 10B	Morrissey Ridge	6100	3/29	69	22.8	37.5	-
BC 10A	New Fernie	4100	3/29	29	9.8	23.0	15.4
15A01	Red Mountain	6000	3/27	47	14.9	27.1	21.4
BC 8A	Sinclair Pass	4500	3/29	18	5.2	9.4	5.4
BC 20A	Sullivan Mine	5100	4/1	43	13.1	20.4	15.6
BC 41	Upper Elk River	4400	3/27	5	1.6	9.5	8.2
14A07	Weasel Divide	5450	3/28	90	31.1	53.0	34.1

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
15B15M	Baree Trail	3800	48	7.5	4/1	6.5	5.2	-
14A10M	Murphy Lake R.S.	3000	48	22.6	4/2	20.0	21.9	-
15A02M	Raven R.S.	3050	48	23.0	4/3	21.5	22.2	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 1

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW	
					LAST YEAR*	AVERAGE
	FISHER RIVER					
3020	Jennings (near)	Apr-Sept	192	60	341	318
	KOOTENAI RIVER					
3030	Libby (at)	Apr-Sept	6300	78	9032	8096
	YAAK RIVER					
3045	Troy (near)	Apr-Sept	455	82	583	555
	KOOTENAI RIVER					
3050	Leonia (at)	Apr-Sept	7110	76	10,069	9327

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

FLATHEAD RIVER BASIN
MONTANA

as of

APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The low elevation snow pack decreased during March. The snow at higher elevations is near average. Presently the snow cover over the Flathead River headwaters is 63 percent of last year and 79 percent average. The reduced amount of low elevation snow decreases the potential for damaging high water during the spring period.

Runoff during March was about twice its average.

Streamflow over the next six months is forecast to average 65 to 75 percent of last year and 15 to 30 percent below average.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 3630 FLATHEAD RIVER AT COLUMBIA FALLS	6837	5331	7749	7225	5732	6522	8267	5707	7164	5716	5053	8053	5888	6232	5978	6497	4937	7398	7418	
STATION NO. 3700 SWAN RIVER NEAR BIG FORK	841	514	807	686	619	604	676	570	750	575	568	997	724	707	771	694	533	706	844	

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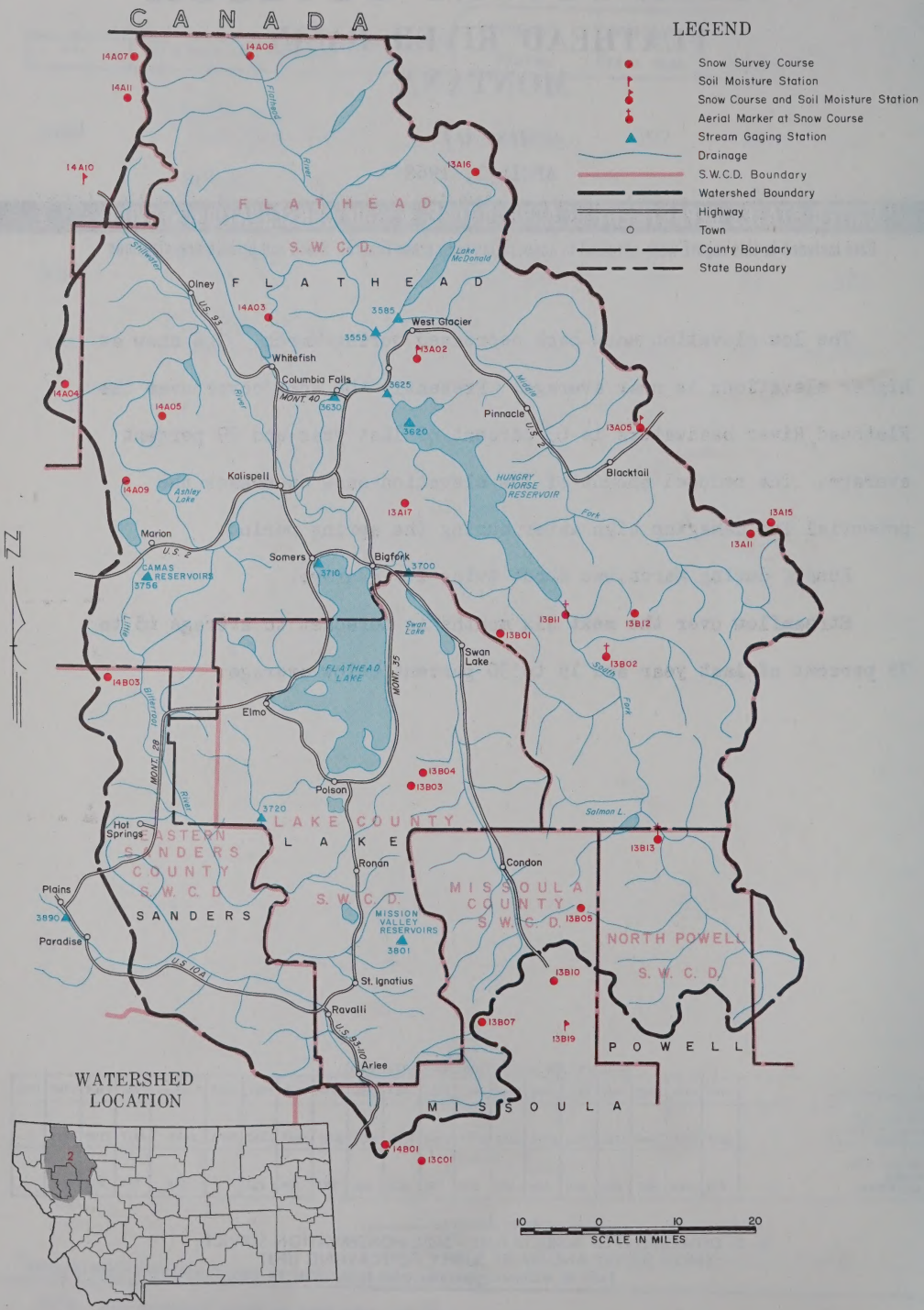
FLATHEAD LAKE RIVER BASIN



MT-2b

SNOW SURVEY DATA

WATERSHED 2

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
13A15	Badger Pass	6900				43.3	-
14B03	Bassoo Peak	5150	3/26	21	7.6	13.1	13.4*
13A11	Beaver Lake	5900				31.1	23.0*
13B03	Big Creek	6750	3/28	104	41.9	55.2	46.4
14A04	Brush Creek	5000	3/29	23	8.5	15.0	14.3*
13A17	Camp Misery	6400	4/1	111	42.4	64.2	43.0*
13B10	Coyote Hill	4200	3/28	10	4.6	12.8	11.0
13A02	Desert Mountain	5600	4/2	44	15.6	20.9	16.9
13B04	Fatty Creek	5500	3/28	53	19.2	31.0	21.7
BC 10	Fernie	3500	3/29	2	1.0	10.6	9.5
14A11	Graves Creek	4300	3/28	37	12.9	25.3	-
14A09	Griffin Creek Divide	5150	3/27	24	7.9	15.8	14.3
13B12	Gunsight Lake	6300				54.4	41.0*
14A03	Hell Roaring Divide	5770	4/1	76	29.2	45.7	32.3
13B13	Holbrook	4530				14.8	10.4*
14A06	Kishenehn	3890	3/28	11	4.5	10.9	10.4
14A05	Logan Creek	4300	3/29	12	5.3	9.7	9.5
13A05	Marias Pass	5250	3/28	33	12.6	24.3	20.1
13A16	Mineral Creek	4000	4/2	30	10.0	25.4	22.9
BC 10B	Morrissey Ridge	6100	3/29	69	22.8	37.5	-
BC 10A	New Fernie	4100	3/29	29	9.8	23.0	15.4*
13B07	North Fork Jocko	6330	3/29	102	40.6	58.2	46.7
13B02	Spotted Bear Mountain	7000				22.3	15.5
13C01	Stuart Mountain	7400	3/30	78	32.1	35.4	32.6
13B01	Trinkus Lake	6100				59.6	44.2*
14B01	TV Mountain	6800	3/31	51	17.5	20.6	18.7*
13B11	Twin Creeks	3580				16.2	12.1*
13B05	Upper Holland Lake	6200				47.4	36.3*
14A07	Weasel Divide	5450	3/28	90	31.1	53.0	34.1

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13A02M	Desert Mountain	5600	54	8.4	4/2	7.6	8.2	7.5
12A05M	Marias Pass	5250	54	6.5	4/1	5.7	5.5	5.5
14A10M	Murphy Lake	3000	48	22.6	4/2	20.0	21.9	-
13B19M	Seeley Lake	4030	48	11.9	4/4	11.9	10.3	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 2

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	NORTH FORK FLATHEAD RIVER					
3555	Columbia Falls (near)	Apr-Sept	1450	71	2143	2027
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	Apr-Sept	1530	79	2108	1923
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (near)(7)	Apr-Sept	1960	82	2609	2381
	FLATHEAD RIVER					
3630	Columbia Falls (at)(7)	Apr-Sept	5050	78	6972	6497
	SWAN RIVER					
3700	Big Fork (near)	Apr-Sept	595	86	696	694
	FLATHEAD RIVER					
3720	Polson (near)(8)	Apr-Sept	6000	77	8163	7778

(7) Adjusted for storage in Hungry Horse Reservoir.
(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3620	Hungry Horse	3,428.0	2,215.0	1,551.0	2,244.4
3710	Flathead Lake	1,791.0	889.4	731.3	690.8
3756	Camas (4)	45.2	25.5	27.1	33.8
3801	Mission Valley (8)	100.3	31.4	26.4	37.2

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
LOWER CLARK FORK RIVER BASIN
MONTANA
as of
APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Warm temperatures caused low elevation snow to decrease during March. High elevation snow pack increased but still remains below average. Snow cover is presently 72 percent of last year and 78 percent average.

Runoff during March was about twice its average. Streamflow for the next six months is forecast to average 20 to 30 percent less than last year.

Late season runoff will be below average on all of the smaller streams flowing into the Clark Fork in this area.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 3405 CLARKS FORK RIVER ABOVE MISSOULA	2470	1590	2030	2369	1782	1887	1737	1590	2012	1577	1699	2044	1452	1250	1812	1838	1427	2130	2517	
STATION NO. 3895 THOMPSON RIVER NEAR THOMPSON FALLS									428	276	177	366	268	290	250	302	175	232	312	

Report prepared by
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SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
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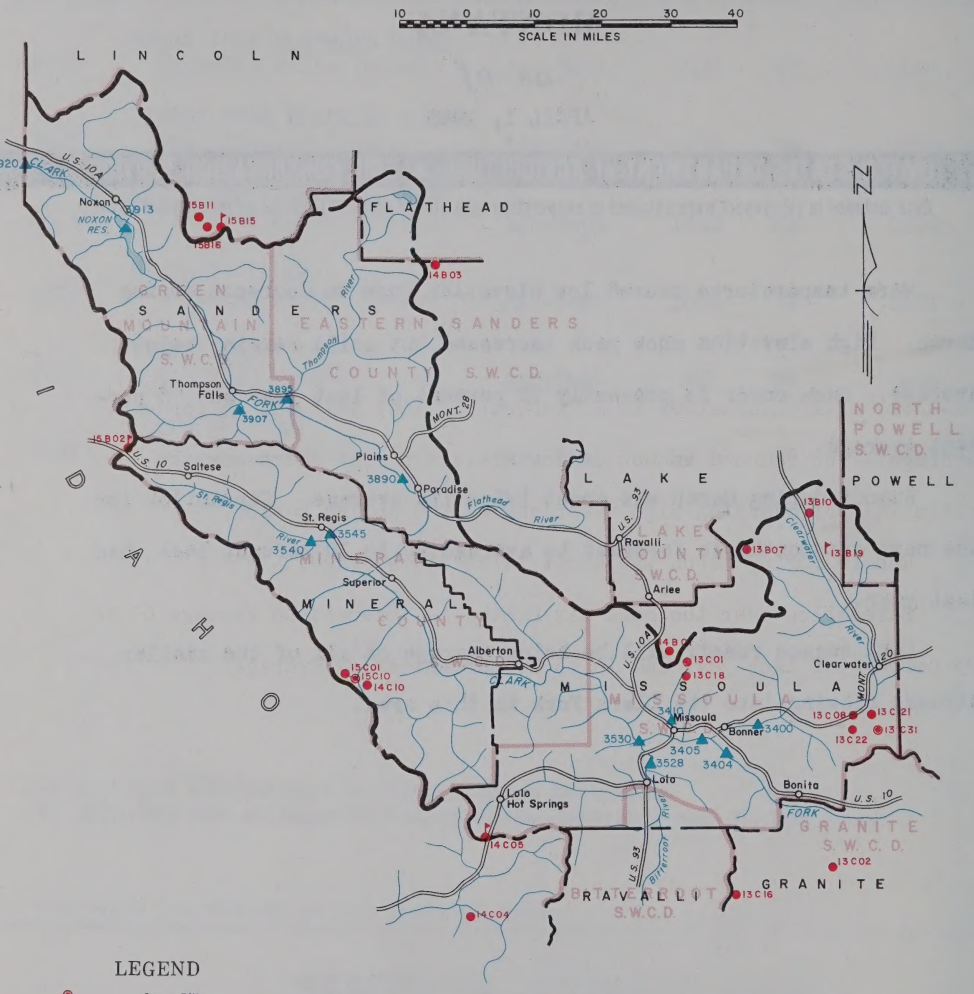
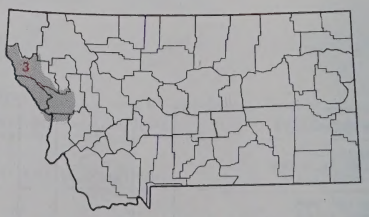
"The Conservation of Water begins with the Snow Survey"

LOWER CLARK FORK RIVER BASIN



LEGEND

- Snow Pillow
- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED 3

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
13C16	Ambrose	6480	4/1	37	12.9	15.4	14.3*
15B11	Baree Creek	5500	4/1	98	40.7	59.6	50.5
15B16	Baree Midway	4600	4/1	66	27.7	46.8	-
15B15	Baree Trail	3800	4/1	0	0.0	9.4	-
14B03	Bassoo Peak	5150	3/26	21	7.6	13.1	13.4*
13B10	Coyote Hill	4200	3/28	10	4.6	12.8	11.0
14C10	Heart Lake Trail	4800	4/2	37	14.8	28.0	-
15C10	Hoodoo Basin	6000	4/2	122	47.6	56.9	-
15C10	Hoodoo Basin Pillow	6000	4/2	SP	46.3	54.8	-
15C01	Hoodoo Creek	5900	4/2	110	41.3	53.4	53.4
14C05	Lolo Pass	5230	3/27	62	24.4	37.8	36.4
15B02	Lookout	5250	4/1	78	28.8	40.8	40.5
13C21	Lubrecht Forest No. 3	5450	3/31	14	5.2	7.4	8.2
13C22	Lubrecht Forest No. 4	4650	3/31	0	0.0	2.8	3.5
13C08	Lubrecht Forest No. 6	4040	3/31	0	0.0	2.3	3.5
13B07	North Fork Jocko	6330	3/29	102	40.6	58.2	46.7
14C04	Savage Pass	6600	3/27	66	24.6	32.0	30.5*
13C02	Slide Rock Mountain	7100	3/27	43	14.3	16.8	16.0
13C18	Spring Gulch	6000	3/30	26	9.6	12.9	12.5*
13C01	Stuart Mountain	7400	3/30	78	32.1	35.4	32.6
14B01	TV Mountain	6800	3/31	51	17.5	20.6	18.7

SP - Snow pillow observation - water content only.

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
15B15M	Baree Trail	3800	48	7.5	4/1	6.5	5.2	-
14C05M	Lolo Pass	5250	48	10.6	4/1	10.0	4.0	5.7
13B19M	Seeley Lake	4030	48	11.9	4/4	11.9	10.4	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 3

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	BLACKFOOT RIVER					
3400	Bonner (near)	Apr-Sept	950	92	1167	1036
	CLARK FORK RIVER					
3404	Milltown (above)(4)	Apr-Sept	860	107	894	802
	CLARK FORK RIVER					
3405	Missoula (above)	Apr-Sept	1810	99	2061	1838
	RATTLESNAKE CREEK					
3410	Missoula (at)	Apr-Sept	67.0	98	68.2	68.2
	BITTERROOT RIVER					
3528	Missoula (at)(6)	Apr-Sept	1440	93		1553
	CLARK FORK RIVER					
3530	Missoula (below)	Apr-Sept	3250	96		3391
	SAINT REGIS RIVER					
3540	Saint Regis (near)	Apr-Sept	255	70		363
	CLARK FORK RIVER					
3545	Saint Regis (at)	Apr-Sept	4150	89	4832	4642
	CLARK FORK RIVER					
3890	Plains (near)(8)	Apr-Sept	10350	81	12838	12793
	THOMPSON RIVER					
3895	Thompson Falls (near)	Apr-Sept	212	70		302
	PROSPECT CREEK					
3907	Thompson Falls (at)	Apr-Sept	118	71		165
	CLARK FORK RIVER					
3920	Whitehorse Rapids (at)(9)	Apr-Sept	11530	80		14398

(4) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner
(6) Difference in observed flow Clark Fork above and below Missoula.
(8) Adjusted for storage in Flathead Lake and Hungry Horse Reservoir.
(9) Adjusted for storage in Flathead Lake, Hungry Horse and Noxon Reservoirs.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3913	Noxon Rapids	334.6	261.9	158.9	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
UPPER CLARK FORK RIVER BASIN
MONTANA

as of

APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Warm temperatures caused a decrease in low elevation snow during March. Higher elevation snow is generally above average except along the Bitterroot-Rock Creek divide.

Snow cover over the drainage is presently about 15 percent less than a year ago and near average.

Late season irrigation supplies on unregulated streams will be near average.

Streamflow over the next six months is forecast to average a little less than last year and near average.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 3404 CLARKS FORK RIVER ABOVE MILLTOWN	1428	778	900	1073	833	806	611	739	880	655	790	706	634	475	722	802	708	1025	1149	
STATION NO. 3400 BLACKFOOT RIVER NEAR BONNER	1312	812	1130	1295	948	1080	1126	851	1132	922	909	1338	818	775	1089	1036	719	1105	1368	

Report prepared by

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SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

UPPER CLARK FORK RIVER BASIN

WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED 4

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
13C16	Ambrose	6480	4/1	37	12.9	15.4	14.3*
13C13	Black Pine	7100	3/28	42	14.0	16.8	14.6*
13C13	Black Pine Pillow	7100	3/28	SP	15.4	17.0	-
12C05	Chessman Reservoir	6200	3/27	18	6.3	5.6	4.9
12B10	Copper Creek	5700	3/26	25	9.3	22.8	15.5*
12C09	Copper Mountain	7700	4/1	45	14.2	13.4	-
12B11	Cotter Mine	6250	3/26	31	10.6	26.0	17.5*
13C09	El Dorado Mine	7800	3/29	77	25.8	23.6	22.6*
13C11	Fred Burr Pass	8000	3/28	89	31.3	30.0	29.0*
13C10	Gold Creek Lake	7200	3/29	58	17.8	18.8	17.0*
13C04	Intergaard	6450	4/2	40	10.3	11.8	8.5*
13C21	Lubrecht Forest No. 3	5450	3/31	14	5.2	7.4	8.2*
13C22	Lubrecht Forest No. 4	4650	3/31	0	0.0	2.8	3.5*
13C08	Lubrecht Forest No. 6	4040	3/31	0	0.0	2.3	3.5*
12C10	Nez Perce Creek	6500	4/1	22	6.6	8.7	-
13D23	Palisade Creek	8450	No Measurement			-	-
12D01	Pipestone Pass	7200	3/26	27	7.0	7.0	6.2
13C12	Red Lion	7100	3/28	64	20.1	18.2	17.5*
12C11	Rocker Peak	8000	3/25	56	18.4	-	-
12C11	Rocker Peak Pillow	8000	3/25	SP	17.4	-	-
13C03	Skalkaho Summit	7260	3/26	75	25.6	30.8	27.4
13C02	Slide Rock Mountain	7100	3/27	43	14.3	16.8	16.0
13C05	Southern Cross	6500	4/2	28	8.3	10.5	7.0*
12C01	Stemple Pass	6600	3/27	31	9.5	15.4	11.0
13C07	Storm Lake	7780	3/25	57	16.6	15.5	15.5
13C06	Stuart Mill	6500	4/2	31	8.7	10.2	7.5*
12C02	Ten Mile Lower	6600	3/26	27	9.3	10.2	7.2
12C03	Ten Mile Middle	6800	3/25	42	13.0	13.3	11.2
12C04	Ten Mile Upper	8000	3/25	52	17.2	15.1	14.3

SP - Snow pillow observation - water content only.

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE		
NO.	NAME	ELEVATION					LAST YEAR	**AVERAGE
13C13M	Black Pine	7100	48	10.0	3/28	7.5	7.9	-
13C03M	Skalkaho Summit	7260	48	10.8	3/26	9.8	9.9	-
12C08M	Stemple Pass	6350	48	5.9	3/29	5.1	4.0	4.5

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 4

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	GERMAN GULCH					
3235	Ramsay (near)	Apr-Sept	14.0	112	18.9	12.5
	RACETRACK CREEK					
3241	Anaconda (near)	Apr-Sept	37.0	105	37.4	35.4
	FLINT CREEK					
3301	Boulder Creek (below)(3)	Apr-Sept	75.0	103	74.3	73.0
	MIDDLE FORK ROCK CREEK					
3320	Philipsburg (near)	Apr-Sept	85.0	109		77.8
	NEVADA CREEK					
3355	Finn (near)	Apr-Sept	21.0	92	28.6	22.8
	BLACKFOOT RIVER					
3400	Bonner (near)	Apr-Sept	950	92	1167	1036
	CLARK FORK RIVER					
3404	Milltown (above)(4)	Apr-Sept	860	107	894	802

(3) Sum Flint Creek at Maxville and Boulder Creek at Maxville.
(4) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3250	Georgetown Lake	31.0	25.2	19.3	21.8
3360	Nevada Creek	12.6	9.0	-	6.3

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
BITTERROOT RIVER BASIN
MONTANA
as of
APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Warm temperatures during March caused a decrease in low elevation snow. Increases were measured on high elevation courses. Presently the snow cover over the Bitterroot drainage is 80 percent of last year and 83 percent average.

Late season irrigation water on unregulated streams is expected to be near to a little below average.

Streamflow during the next six months is forecast to average a little less than last year and 5 to 10 percent below average.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION 3440 BITTERROOT RIVER NEAR DARBY	765	605	630	663	608	557	523	540	740	515	531	593	521	398	545	582	534	783	740	
STATION NO. 3475 BLODGETT CREEK NEAR CORVALLIS	51.3	45	51	46	42	40	52	45	51	42	42	47	36	39	41	45	35	48	55	

Report prepared by
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

"The Conservation of Water begins with the Snow Survey"

BITTERROOT RIVER BASIN

WATER SUPPLY FORECASTS

WATERSHED 5

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(5)	Apr-Sept	170	95		179
	EAST FORK BITTERROOT RIVER					
3434	Conner (near)	Apr-Sept	164	97	180	169
	BITTERROOT RIVER					
3440	Darby (near)	Apr-Sept	550	94	575	582
	SKALKAHO CREEK					
3465	Hamilton (near)	Apr-Sept	55.0	91	58.3	60.6
	BLODGETT CREEK					
3475	Corvallis (near)	Apr-Sept	44.1	99	41.0	44.6
	BITTERROOT RIVER					
3528	Missoula (at)(6)	Apr-Sept	1440	93		1553

(5) Adjusted for storage in Painted Rocks Reservoir.
(6) Difference in observed flow Clark Fork above and below Missoula.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3420	Painted Rocks	31.7	25.5	15.2	14.1
3445	Como	34.9	22.3	11.8	13.4

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

SNOW SURVEY DATA

WATERSHED 5

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
13C16	Ambrose	6480	4/1	37	12.9	15.4	14.3*
13D01	East Fork R. S.	5400	3/29	13	5.6	7.0	7.7
13D02	Gibbons Pass	7100	3/28	65	22.3	26.2	25.0
14D03	Kit Carson	5020	3/29	10	4.4	10.6	9.0
14C05	Lolo Pass	5230	3/27	62	24.4	37.8	36.4*
14C07	Lost Horse	5940	3/28	76	29.8	34.5	35.6*
13D16	Moose Creek	6200	3/27	43	13.8	18.4	17.1
14D02	Nez Perce Camp	5680	3/29	28	10.4	17.4	15.8
14D01	Nez Perce Pass	6570	3/29	41	15.9	19.4	18.3
13D23	Palisade Creek	8450	No Measurement			-	-
13D22	Saddle Mountain	7940	3/29	76	26.2	28.4	-
13D22	Saddle Mountain Pillow	7940	3/29	SP	26.7	-	-
14C04	Savage Pass	6600	3/27	66	24.6	32.0	30.5*
13C03	Skalkaho Summit	7260	3/26	75	25.6	27.2	22.5
14C13	Twelvemile Creek	5600	3/28	44	17.9	-	-
14C13	Twelvemile Creek Pillow	5600	3/28	SP	18.4	-	-
14C08	Twin Lakes	6510	3/28	114	41.9	46.3	46.7*
14C12	Twin Lakes Pillow	6400	3/28	SP	39.3	-	-

SP - Snow pillow observation - water content only.

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
13D18M	Gibbons Pass	7100	48	7.1	3/29	5.7	4.8	5.3
14C05M	Lolo Pass	5250	48	10.6	4/1	10.0	4.0	5.7
13C03M	Skalkaho Summit	7260	48	10.8	3/26	9.8	9.9	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY OUTLOOK
MARIAS, TETON and SUN RIVER BASINS
MONTANA
as of
APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Warm temperatures during March decreased low elevation snow. In higher elevations, snow pack is nearer average. Over the area, snow cover is presently 63 percent of last year and 81 percent average. The potential for damaging high water this spring is less than normal because of the reduced amount of low elevation snow cover.

Late season irrigation water from unregulated streams is expected to be below average. However, the denser high elevation snow pack will help delay streamflow into the critical irrigation period.

Streamflow during the next six months is forecast to average 55 to 65 percent of last year and 70 to 80 percent average.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 9786 SUN RIVER AT GIBSON DAM	741	411	712	752	499	738	748	517	669	531	555	749	436	474	616	610	387	737	702	
STATION NO. 0995 MARIAS RIVER NEAR SHELBY	1132	340	950	1013	457	928	782	600	683	510	483	698	405	380	398	651	280	937	751	

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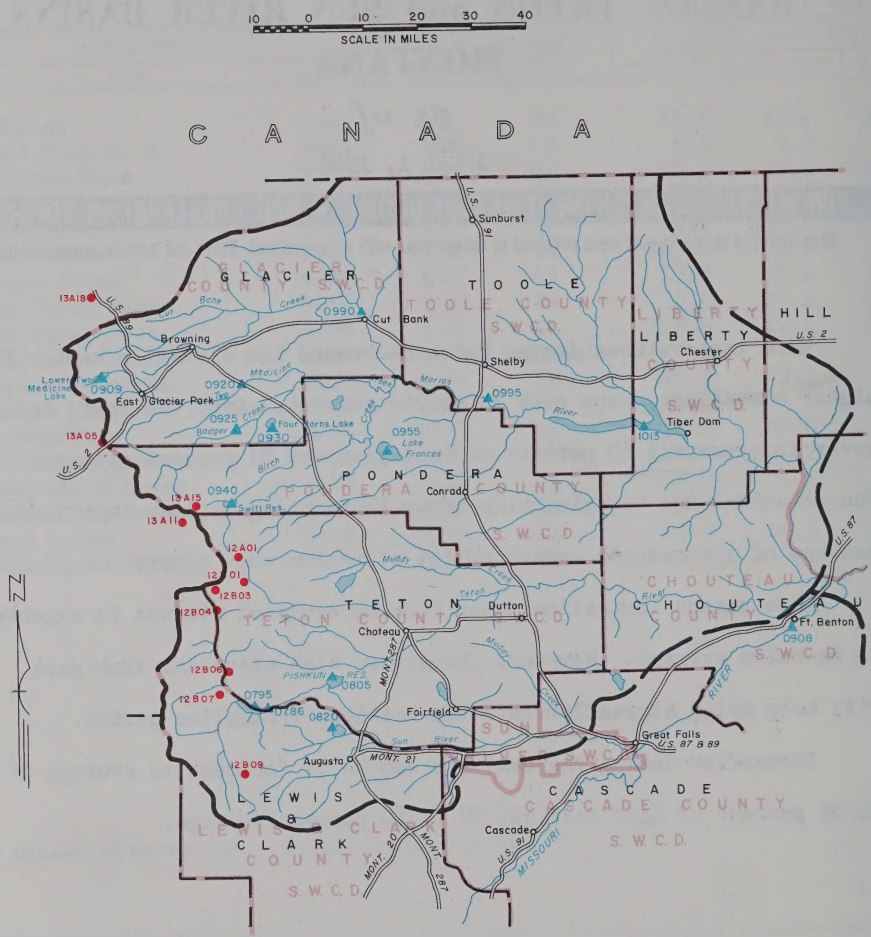
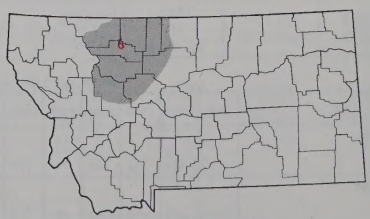
SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

MARIAS, TETON and SUN RIVER BASINS



LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED 6

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
13A15	Badger Pass	6900				43.3	36.0*
13A11	Beaver Lake	5900				31.1	23.0*
12B06	Cabin Creek	5200	4/3	15	4.5	14.4	7.0*
12B09	Five-Bull	5700				12.1	7.1*
12A01	Freight Creek	6000				23.3	17.0
12B07	Goat Mountain	7000	3/31	26	8.0	15.6	12.3
13A18	Hudson Bay Divide	5800	3/29	48	17.2	23.6	19.3*
13A05	Marias Pass	5250	3/28	33	12.6	24.3	20.1
13A16	Mineral Creek	4000	4/2	30	10.0	25.4	22.9
12B04	Wrong Creek	5700	4/2	32	11.8	21.6	15.8*
12B03	Wrong Ridge	6800	4/2	50	18.2	28.4	22.2*

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
13A05M	Marias Pass	5250	54	6.5	4/1	5.7	5.5	5.5

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 6

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	SUN RIVER					
0786	Gibson Dam (at)(18)	Apr-Sept	490	80	747	610
	MISSOURI RIVER					
0908	Fort Benton (at)(17)	Apr-Sept	3700	111		3319
	TWO MEDICINE CREEK					
0920	Browning (near)(19)	Apr-Sept	210	77	323	271
	BADGER CREEK					
0925	Browning (near)	Apr-Sept	105	74		143
	CUT BANK CREEK					
0990	Cut Bank (at)	Apr-Sept	88.0	67		131
	MARIAS RIVER					
0995	Shelby (near)(20)	Apr-Sept	450	69	791	651

(17) Adjusted for storage in Canyon Ferry Reservoir.
(18) Adjusted for storage in Gibson Reservoir and diversions.
(19) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.
(20) Adjusted for storage in Two Medicine, Four Horns, Lake Frances and Swift Reservoirs.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0795	Gibson	105.0	41.1	24.3	60.6
0805	Pishkun	32.0	16.2	15.8	18.2
0820	Willow Creek	32.3	17.8	16.6	21.0
0930	Four Horns	19.2		11.6	10.6
0940	Swift	30.0	16.2	-	23.9
0955	Lake Frances	112.0	71.1	77.1	92.8
1013	Tiber	1,347.0	422.2	466.4	647.4**

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

MISSOURI RIVER (MAIN STEM) BASIN

MONTANA

as of

APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The snow pack continued to increase during March, even though temperatures were mild. The present snow cover is 90 percent of last year and 122 percent average.

Late season irrigation water from unregulated streams is expected to be near to above average.

Streamflow during the next six months is forecast to be well above average on streams East of the Missouri, while those to the Northwest will be below average.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 0615 PRICKLY PEAR CREEK NEAR CLANCY	42	22	27	26	22	27	16	22	16	15	24	18	19	10	23	22	19	36	26	
STATION NO. 0770 SHEEP CREEK NEAR WHITE SULPHUR SPRINGS	24	16	17	18	18	25	13	18	12	15	11	20	14	10	17	17	17	27	32	
STATION NO. 0545 MISSOURI RIVER AT TOSTON	3475	2512	2220	2319	2895	2139	1561	1730	2345	2187	1971	1991	1774	1102	2347	2147	2199	2710	3432	

Report prepared by

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

MISSOURI RIVER (MAIN STEM) BASIN

SNOW SURVEY DATA

WATERSHED 7

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
11C01	Boulder Mountain	7950	3/25	56	20.0	21.1	15.5*
12C05	Chessman Reservoir	6200	3/27	18	6.3	5.6	4.9
10C09	Deadman Creek	6450	3/27	38	11.6	16.8	-
10C09	Deadman Creek Pillow	6450	3/27	SP	10.8	-	-
10C07	Elk Peak	8000	3/26	57	19.5	22.2	15.8*
10C02	Grasshopper	7000	3/26	27	7.6	7.8	5.7
10C01	Kings Hill	7500	3/26	48	15.2	19.4	11.0
12C11	Rocker Peak	8000	3/25	56	18.4	-	-
12C11	Rocker Peak Pillow	8000	3/25	SP	17.4	-	-
10C06	Spur Park	8000	3/27	66	23.8	30.0	-
10C06	Spur Park Pillow	8000	3/27	SP	22.5	24.8	-
12C01	Stemple Pass	6600	3/27	31	9.5	15.4	11.0
12C02	Ten Mile Lower	6600	3/26	27	9.3	10.2	7.2
12C03	Ten Mile Middle	6800	3/25	42	13.0	13.3	11.2
12C04	Ten Mile Upper	8000	3/25	52	17.2	15.1	14.3

SP - Snow pillow observation - water content only.

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
10C01M	Kings Hill	7420	48	11.8	3/27	6.2	4.9	7.3
12C08M	Stemple Pass	6350	48	5.9	3/29	5.1	4.0	4.1

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 7

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER					
0545	Toston (at)(16)	Apr-Sept	2530	118	2990	2147
	PRICKLY PEAR CREEK					
0615	Clancy (near)	Apr-Sept	26.0	118		22.0
	DEARBORN RIVER					
0735	Craig (near)	Apr-Sept	110	80	209	138
	SHEEP CREEK					
0770	W. Sulphur Springs (near)	Apr-Sept	24.4	148	28.1	16.5
	SMITH RIVER					
0775	Eden (near)	Apr-Sept	250	162	354	154
	SUN RIVER					
0786	Gibson Dam (at)(17)	Apr-Sept	490	80	747	610
	BELT CREEK					
0905	Monarch (near)	Apr-Sept	135	146		92.5
	MISSOURI RIVER					
0908	Fort Benton (at)(18)	Apr-Sept	3700	111		3319

(16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.
(17) Adjusted for storage in Gibson Reservoir and diversions.
(18) Adjusted for storage in Canyon Ferry Reservoir.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0585	Canyon Ferry	2,043.0	1,430.0	1,028.0	1,529.0**
0645	Lake Helena	10.4	9.4	10.2	5.6
0650	Hauser Lk. & Lk. Helena	61.9	59.0	61.3	44.6
0660	Holter Lake	81.9	78.5	80.6	51.7
0750	Smith River	10.7	10.5	6.0	6.5**
0795	Gibson	105.0	41.1	24.3	60.6

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
JEFFERSON RIVER and TRIBUTARY BASINS
MONTANA
as of

APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Almost all snow courses showed increases during March. However, some melt occurred at lower elevations. Presently the snow cover in the Beaverhead-Ruby drainage is 85 percent of last year and 115 percent average. The Big Hole-Boulder is 92 percent of last year and 104 percent average.

Late season irrigation water from uncontrolled streams is expected to be near average.

Streamflow during the next six months is forecast to average 70 to 80 percent of last year and near to above average on most streams.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 0215 RED ROCK RIVER NEAR MONIDA	81	78	100	70	127	81	58	71	60	105	93	54	55	36	110	78	60	110	136	
STATION NO. 0255 BIG HOLE RIVER NEAR MELROSE	1159	749	778	861	808	745	541	592	842	720	714	645	556	397	671	718	681	849	1166	
STATION NO. 0330 BOULDER RIVER NEAR BOULDER	136	65	81	92	85	84	49	73	76	67	82	68	73	46	70	76	81	108	139	

Report prepared by
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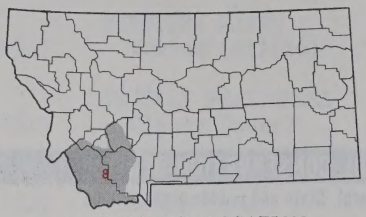
SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

JEFFERSON RIVER and TRIBUTARY BASINS



WATERSHED LOCATION

LEGEND

- Snow Pillow
- Precipitation Gage
- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary

15 0 15 30
SCALE IN MILES

SNOW SURVEY DATA

WATERSHED 8

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
Big Hole - Boulder							
13D20	Abundance Lake	8800				21.2	20.3*
12C07	Berry Meadow	7300	3/25	30	8.0	14.2	7.8
13D10	Bloody Dick	7600	3/28	39	11.8	12.4	11.7
12C05	Chessman Reservoir	6200	3/27	18	6.3	5.6	4.9
12C09	Copper Mountain	7700	4/1	45	14.2	13.4	-
13D19	Darkhorse Lake	8600				31.0	26.0*
13D15	Elk Horn Springs	7800	4/1	35	10.0	10.0	10.4
13D21	Foolhen	8280				21.5	18.2*
13D02	Gibbons Pass	7100	3/28	65	22.3	26.2	25.0
13D09	Gold Stone	8100	3/28	50	15.6	16.6	15.3
13D08	Jahnke Creek	7340	3/28	28	8.6	10.8	11.2
12C10	Nez Perce Creek	6500	4/1	22	6.6	8.7	-
13D23	Palisade Creek	8450	No measurement			-	-
12C06	Picnic Grounds	6500	4/2	19	4.8	6.0	4.8*
12D01	Pipestone Pass	7200	3/26	27	7.0	7.0	6.2
12C11	Rocker Peak	8000	3/25	56	18.4	-	-
12C11	Rocker Peak Pillow	8000	3/25	SP	17.4	-	-
13D22	Saddle Mountain	7900	3/29	76	26.2	28.4	-
13D22	Saddle Mountain Pillow	7900	3/29	SP	26.7	-	-
13D24	Slag-A-Melt Lake	8750				-	-
13C07	Storm Lake	7780	3/25	57	16.6	15.5	15.5
12C02	Ten Mile Lower	6600	3/26	27	9.3	10.2	7.2
12C03	Ten Mile Middle	6800	3/25	42	13.0	13.3	11.2
12C04	Ten Mile Upper	8000	3/25	52	17.2	15.1	14.3

SP - Snow pillow observation - water content only.

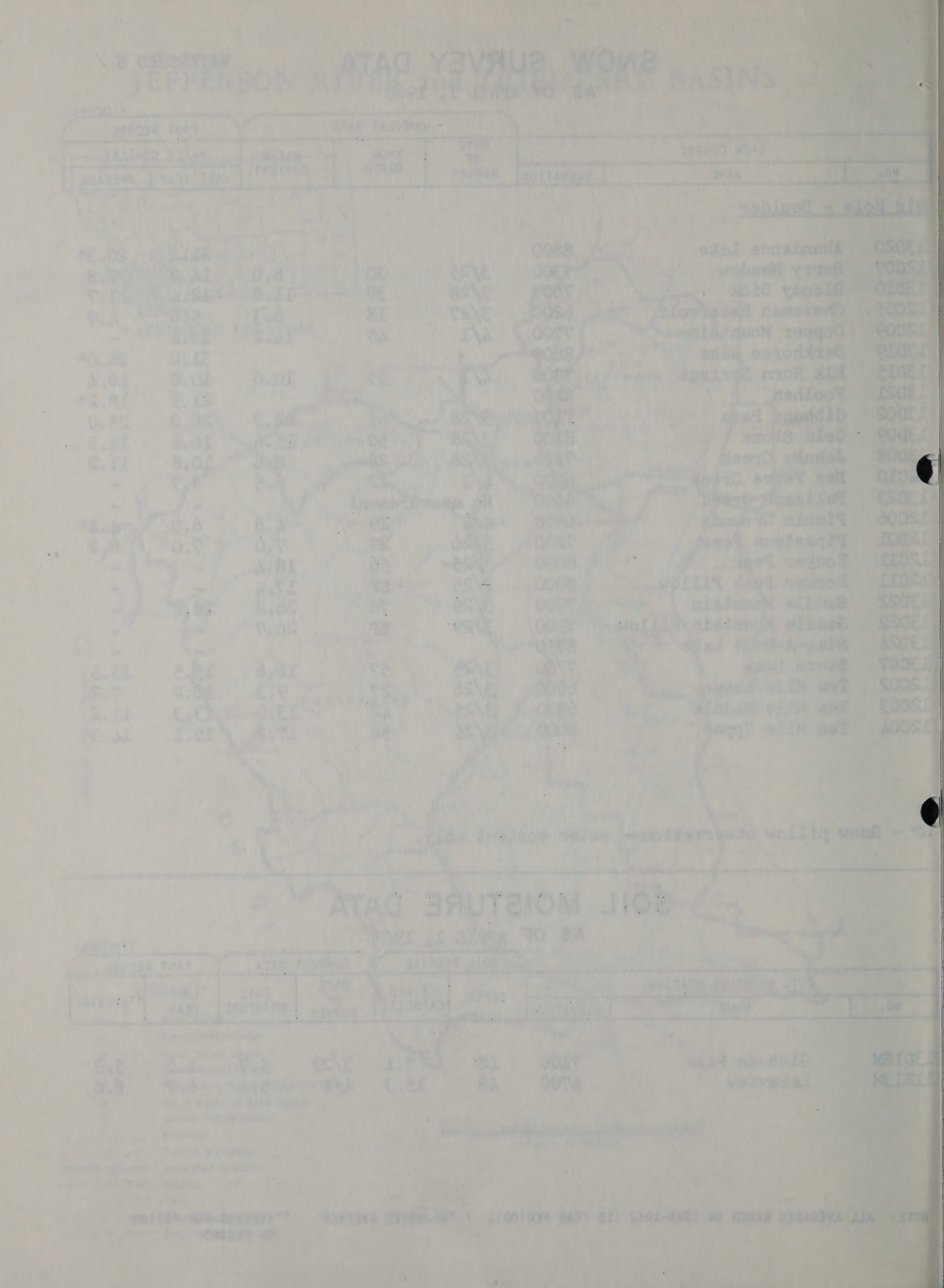
SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13D18M	Gibbons Pass	7100	48	7.1	3/29	5.7	4.8	5.3
11E13M	Lakeview	6700	48	15.3	4/1	5.4	6.7	8.8

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD



SNOW SURVEY DATA

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
Beaverhead - Ruby Drainage							
11E11	Blue Ledge Mine	6700	4/5	43	14.7	23.0	16.7
11D14	Branham Lakes	8850	4/1	79	30.8	30.0	-
11D07	Call Road	8050				14.7	10.2*
12D04	Carter Creek	7400	3/31	25	6.4	9.4	5.8*
11D08	Clover Meadow	8600				21.7	15.0*
13E22	Dad Creek Lake	8400				17.4	-
12E07	Divide	7900				13.1	9.0*
11E12	Kilgore	6200	4/5	25	9.0	11.1	10.0
11E04	Lakeview Canyon	6930	3/29	40	13.7	17.5	10.8
11E03	Lakeview Ridge	7400	3/29	35	11.7	16.7	9.7
13E01	Lemhi Pass	7480	3/29	33	10.2	9.4	9.2
13E23	Lemhi Ridge	8100	3/29	32	9.9	10.0	-
11E28	Lion Mountain	8760	3/27	63	21.5	22.8	-
11D15	Middle Mill Creek	7850	4/1	46	16.4	14.0	-
12E06	Notch	8500				18.7	12.8*
11E32	Sawtell Mountain	9100	3/28	77	28.1	-	-
12D05	Smuggler Mine	6960	4/1	33	10.6	9.0	-
13E02	Trail Creek	7090	3/29	31	9.0	9.3	8.8
11E27	Upper West Fork	8750	No Measurement			19.1	-
12E01	White Pine Ridge	8850				5.2	5.9

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

WATER SUPPLY FORECASTS

WATERSHED 8

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	RED ROCK RIVER					
0125	Monida (near)(11)	Apr-Sept	78.5	100	110	78.4
	BEAVERHEAD RIVER					
0154	Armstead (near)(12)(11)	Apr-Sept	100	91	142	111
	RUBY RIVER					
0195	Alder (near)	Apr-Sept	90	113		79.6
	BIG HOLE RIVER					
0255	Melrose (near)	Apr-Sept	750	104		718
	BIRCH CREEK					
0260	Glen (near)	Apr-Sept	13.9	113	18.4	12.3
	BOULDER RIVER					
0330	Boulder (near)	Apr-Sept	94.0	123	116	76.3
	JEFFERSON RIVER					
0345	Sappington (at)(12)	Apr-Sept	1070	110		974

(11) Adjusted for storage in Lima Reservoir.
(12) Adjusted for storage in Clark Canyon Reservoir.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0120	Lima	84.0	43.1	14.4	27.3
0153	Clark Canyon	328.9	159.3	115.0	-
0205	Ruby	38.8		-	26.1**

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

MADISON and GALLATIN RIVER BASINS

MONTANA

as of

APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Some melt occurred at lower elevations during March. The present snow cover in the Madison drainage is 81 percent of a year ago and 95 percent average. In the Gallatin it is about the same as last year and 127 percent average.

Late season irrigation water on unregulated streams is expected to be near to a little above average on Madison tributaries. On the Gallatin drainage streams, late season water is expected to be above average.

Streamflow is forecast at 80 percent of last year on the Madison. Gallatin drainage streams are forecast to produce about the same volume as last year.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 0385 MADISON RIVER NEAR GRAYLING	406	424	444	468	563	434	420	345	489	454	359	366	327	329	468	420	430	474	577	
STATION NO. 0435 GALLATIN RIVER NEAR GALLATIN GATEWAY	566	393	454	399	596	404	365	350	499	469	384	507	416	331	577	447	455	551	649	
STATION NO. 0485 BRIDGER CREEK NEAR BOZEMAN	42	12	19	19	28	27	12	17	19	14	15	24	21	9	21	20	28	24	31	

Report prepared by
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

"The Conservation of Water begins with the Snow Survey"

MADISON and GALLATIN RIVER BASINS

SNOW SURVEY DATA

WATERSHED 9

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
Madison Drainage							
11D07	Call Road	8050				14.7	10.2*
10E03	Canyon	7750	3/29	48	15.3	21.7	16.3
11D08	Clover Meadow	8600				21.7	15.0
11D12	Four Mile	6900	3/27	32	9.7	8.9	9.0*
11E25	Freezeout Lake	7200	No Measurement			10.8	-
11E26	Freezeout Mountain	8250	No Measurement			20.4	-
11E05	Hebgen Dam	6550	3/30	35	13.1	13.3	12.2
11D05	Jack Creek	7500	3/26	25	7.2	7.8	6.9*
11E22	Lake Creek	6100	3/25	28	8.0	9.8	-
11E16	Latham Springs	7650	3/27	79	27.4	38.2	36.0*
11E28	Lion Mountain	8760	3/27	63	21.5	22.8	-
11E28	Lion Mountain Pillow	8760	3/27	SP	18.4	20.0	-
11D11	Lower Twin	7900	3/27	69	23.2	21.2	20.0*
11E31	Madison Plateau	7750	3/28	53	18.5	-	-
11E31	Madison Plateau Pillow	7750	3/28	SP	21.0	-	-
11E23	Meridian Creek	7000	3/26	36	10.6	10.8	-
11E02	Norris Basin	7500	3/31	36	12.6	13.6	9.9*
11D03	North Meadow	7500	3/27	35	9.0	9.0	9.4
11E21	Potomageton Park	7150	3/29	41	15.6	21.0	-
11E20	Sentinel Creek	8300	3/29	71	26.8	32.1	-
11E33	Soap-Bogus	7600	No Measurement				
11E24	Tepee Creek	8000	3/26	50	15.0	17.2	-
10E07	Thumb Divide	7900	3/31	57	19.0	26.8	24.2
11E08	Valley View	6500	3/28	50	17.8	25.2	16.4
11E07	West Yellowstone	6700	3/31	29	9.8	17.0	11.7
11E07	West Yellowstone Pillow	6700	3/28	SP	8.7	14.4	-
11E30	Whiskey Creek	6800	3/28	55	19.5	26.0	-

SP - Snow pillow observation - water content only.

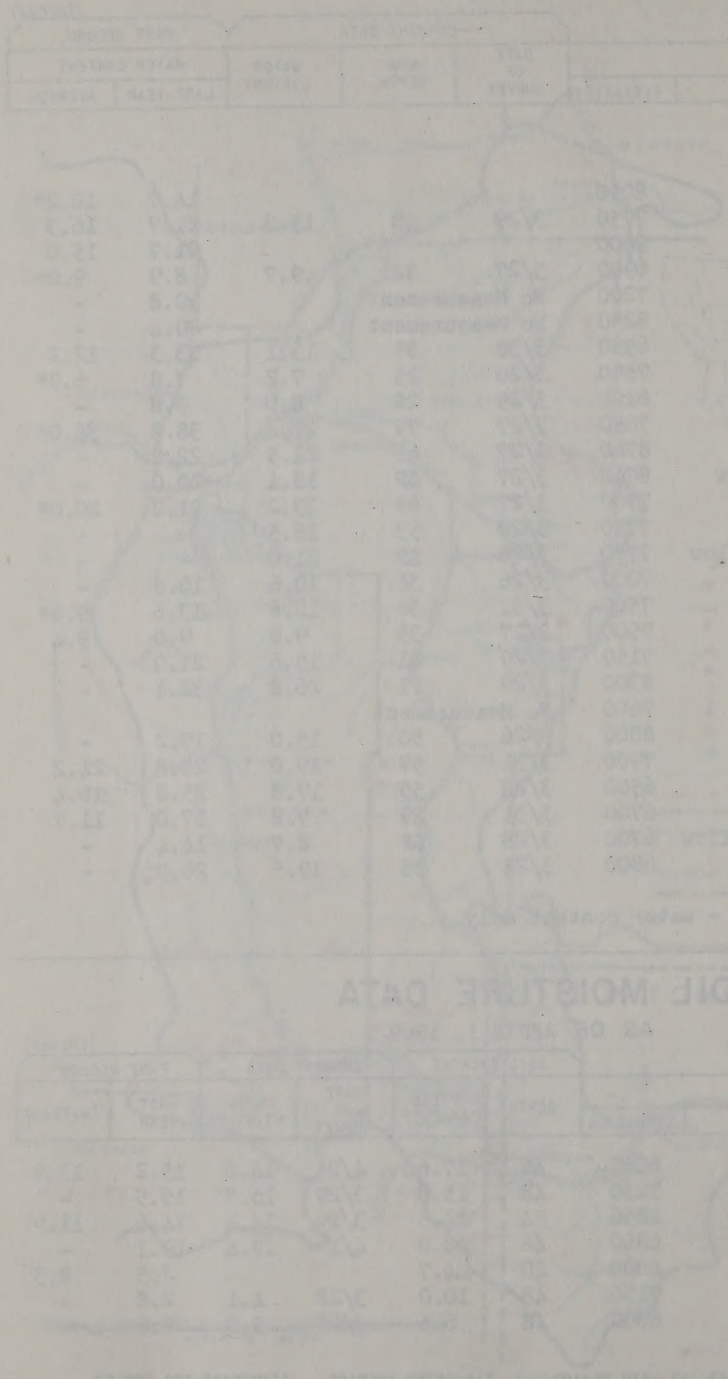
SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
10D11M	Battle Ridge	6020	48	17.6	4/2	14.6	15.2	13.9
10D15M	Bridger Bowl	7250	48	15.8	3/29	15.7	15.5	-
11D02M	College Site	4856	54	14.5	3/29	14.4	14.6	11.7
10D13M	Lick Creek	6860	48	18.8	4/1	17.8	19.1	-
10D04M	Red Bluff	4800	40	4.7			2.5	2.3
11E06M	Twenty-One Mile	7150	48	10.0	3/28	4.1	2.8	-
11E07M	West Yellowstone	6700	48	6.5	3/28	3.7	2.6	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD



SNOW SURVEY DATA

AS OF APRIL 1, 1968

WATERSHED 9
(Cont'd)

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
Gallatin Drainage							
10D14	Arch Falls	7350	4/1	78	16.5	16.8	12.1*
11D09	Bear Basin	8150	3/26	73	26.0	25.1	20.4*
10D15	Bridger Bowl	7250	3/29	91	35.4	34.5	26.0*
10D15	Bridger Bowl Pillow	7250	3/29	SP	30.5	33.0	-
11E29	Carrot Basin	9000				44.0	-
11E29	Carrot Basin Pillow	9000	3/22	SP	26.0	38.9	-
10D04	Devil's Slide	8100	4/1	76	28.2	26.8	22.3
10D03	Hood Meadow	6600	4/1	34	11.8	13.4	10.0
10D13	Lick Creek	6860	4/1	37	11.6	13.6	-
10D13	Lick Creek Pillow	6860	4/1	SP	11.4	15.0	-
11D10	Little Park	7400	3/26	60	21.0	19.4	14.8
10D18	Maynard Creek	6210	3/29	55	20.4	19.0	-
10D18	Maynard Creek Pillow	6210	3/29	SP	14.2	14.8	-
10D01	New World	6700	3/27	44	15.4	16.2	10.8
10D10	Sacajawea	6550	4/2	49	18.0	17.2	13.0*
10D16	Shower Falls	8100	4/1	83	32.8	31.8	-
10D16	Shower Falls Pillow	8100	4/1	SP	29.2	27.8	-
11D13	Taylor Peaks	8500	3/25	68	26.1	-	-
11E06	Twenty-One Mile	7150	3/31	44	16.0	24.5	18.2

SP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

WATER SUPPLY FORECASTS

WATERSHED 9

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	JEFFERSON RIVER					
0345	Sappington (at)(12)	Apr-Sept	1070	110		974
	WILLOW CREEK					
0350	Harrison (near)	Apr-Sept	17.0	120		14.2
	MADISON RIVER					
0375	West Yellowstone (near)	Apr-Sept	215	103	269	208
	MADISON RIVER					
0385	Grayling (near)(13)	Apr-Sept	450	107	594	420
	MADISON RIVER					
0410	McAllister (near)(14)	Apr-Sept	810	113	996	718
	GALLATIN RIVER					
0435	Gateway (near)	Apr-Sept	595	133		447
	BRIDGER CREEK					
0485	Bozeman (near)	Apr-Sept	31.0	155	31.6	19.9
	HYALITE CREEK					
0500	Bozeman (near)(15)	Apr-Sept	50.0	140		35.6
	GALLATIN RIVER					
0525	Logan (at)	Apr-Sept	675	144	642	467
	MISSOURI RIVER					
0545	Toston (at)(16)	Apr-Sept	2530	118	2990	2147

(12) Adjusted for storage in Clark Canyon Reservoir.
(13) Adjusted for storage in Hebgen Lake.
(14) Adjusted for storage in Hebgen and Ennis Lakes.
(15) Adjusted for storage in Middle Creek Reservoir.
(16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0360	Willow Creek	18.0	17.8	16.6	21.0
0380	Hebgen Lake	377.5	237.0	195.1	179.1
0405	Ennis Lake	41.0	35.2	39.4	36.4
0495	Middle Creek	8.0	3.4	3.8	3.9**

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
JUDITH and MUSSELSHELL RIVER BASINS
MONTANA

as of
APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Some melt occurred at lower elevations during March. Presently the snow cover is about 15 percent less than a year ago and 124 percent average.

Late season irrigation water on unregulated streams is expected to be near to above average.

Streamflow is forecast above average on all tributary streams in the area.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 1185 SOUTH FORK MUSSELSHELL RIVER ABOVE MARTINSDALE	97	49	68	54	79	55	27	25	47	56	26	57	32	11	50	49	45	56	74	
STATION NO. 1098 SOUTH FORK JUDITH RIVER NEAR UTICA												13	9	3	14	12	10	19	17	

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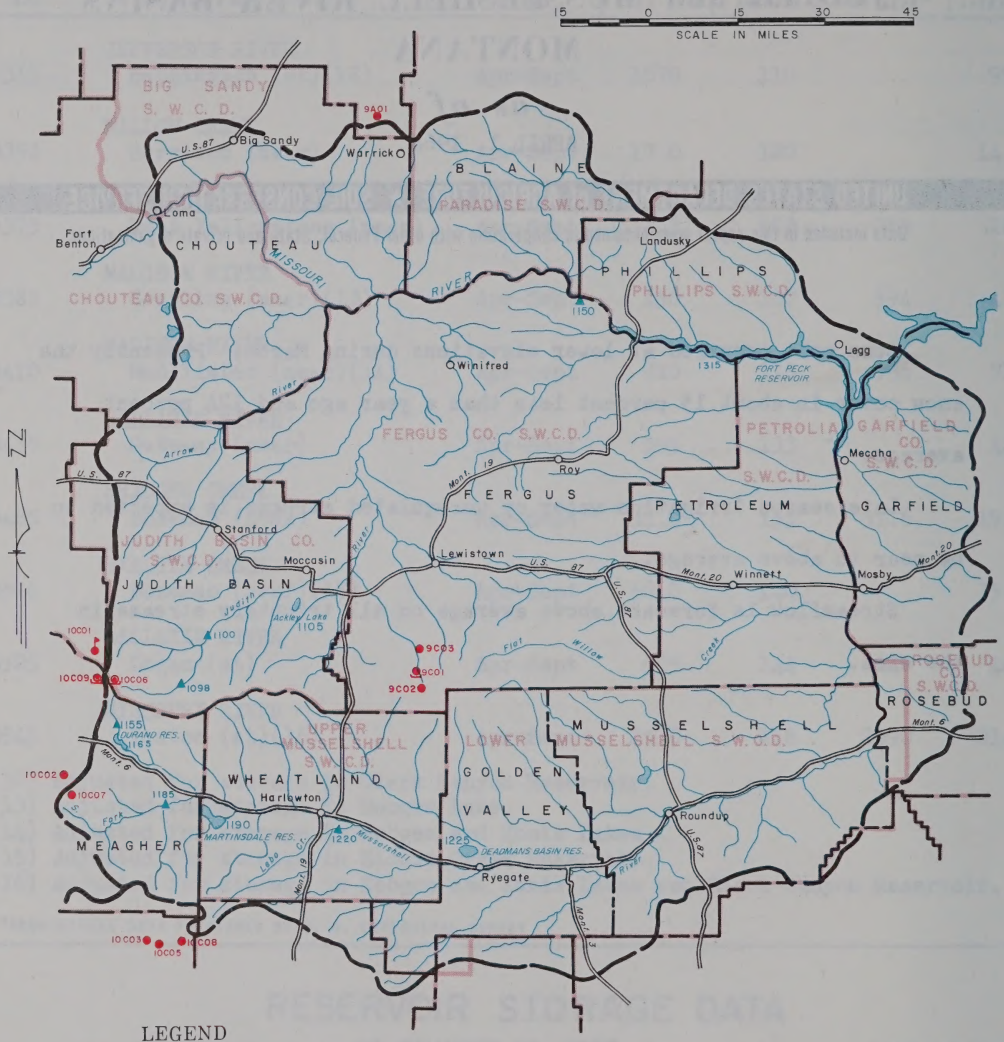
JUDITH and MUSSELSHELL RIVER BASINS



SNOW SURVEY DATA

WATERSHED 10

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
9C02	Avalanche	7100	4/1	71	27.3	30.9	-
10C05	Bald Ridge	7500	3/28	47	14.4	15.6	11.7*
9C01	Crystal Lake	6100	4/1	42	16.0	19.1	12.2
10C09	Deadman Creek	6450	3/27	38	11.6	16.8	-
10C09	Deadman Creek Pillow	6450	3/27	SP	10.8	-	-
10C07	Elk Peak	8000	3/26	57	19.5	22.2	15.8*
10C02	Grasshopper	7000	3/26	27	7.6	7.8	5.7
10C01	Kings Hill	7500	3/26	48	15.2	19.4	13.6
10C03	Porcupine R. S.	6500	3/28	37	11.0	9.4	7.7
9C03	Rock Creek	5600	4/1	30	11.5	12.3	-
9A01	Rocky Boy	4700	4/1	13	4.4	8.4	4.3
9A01	Rocky Boy Pillow	4700	4/1	SP	4.1	-	-
10C08	South Fork Shields	8100	3/28	77	27.1	29.6	-
10C06	Spur Park	8000	3/27	66	23.8	31.3	19.2*
10C06	Spur Park Pillow	8000	3/27	SP	22.5	30.0	-

SP - Snow pillow observation - water content only.

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
10C01M	Kings Hill	7420	48	11.8	3/27	6.2	4.9	7.3

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 10

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	SOUTH FORK JUDITH RIVER					
1098	Utica (near)	Apr-Sept	16.5	147		11.2
	MISSOURI RIVER					
1150	Zortman (near)(21)	Apr-Sept	4680	104		4508
	N. FORK MUSSELSHELL RIVER					
1155	Delpine (near)	Apr-Sept	7.4	123		6.0
	S. FORK MUSSELSHELL RIVER					
1185	Martinsdale (above)	Apr-Sept	58.0	121		48.8

(21) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
1105	Ackley Lake	5.8		-	3.5
1165	Durand	7.0	7.0	4.2	4.9
1190	Martinsdale	23.1	9.4	7.4	8.7
1225	Deadman's Basin	72.2	61.0	45.8	41.6**

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

UPPER YELLOWSTONE RIVER BASIN

MONTANA

as of

APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Some melt occurred during March at lower elevations. The snow cover is variable over the drainage. Snow pack in Yellowstone Park headwaters is generally below average, increasing to above average in drainages outside the Park.

Over the entire drainage above Billings the mountain snow cover is 84 percent of last year and 105 percent average.

Late season irrigation water is expected to be near average on all tributaries.

Streamflow during the next six months is forecast to average 15 to 20 percent less than last year.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 1935 SHIELDS RIVER AT CLYDE PARK	217	113	116	94	162	130	65	72	97	77	50	106	63	36	86	99	101	133	162	
STATION NO. 1925 YELLOWSTONE RIVER NEAR LIVINGSTON	2480	2216	2427	2474	2417	1820	2232	1621	2689	2272	1630	2098	1527	1440	2562	2127	2128	2392	2982	
STATION NO. 2075 CLARK FORK YELLOWSTONE RIVER AT CHANCE	588	564	713	757	576	519	600	419	716	715	487	648	386	442	622	583	593	602	763	

Report prepared by

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SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

"The Conservation of Water begins with the Snow Survey"

UPPER YELLOWSTONE RIVER BASIN

SNOW SURVEY DATA

WATERSHED 11

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
10C05	Bald Ridge	7500	3/28	47	14.4	15.6	11.7*
10D15	Bridger Bowl	7250	3/29	91	35.4	34.5	26.0*
10D15	Bridger Bowl Pillow	7250	3/29	SP	30.5	33.0	-
9D01	Camp Senia	7890	4/1	31	9.2	10.1	6.3
10E03	Canyon	7750	3/29	48	15.3	21.7	16.3
9D07	Cooke Station	8150	3/29	60	20.6	26.7	-
10D05	Crevice Mountain	8400	3/28	44	13.4	14.1	9.5
10D04	Devil's Slide	8100	4/1	76	28.2	26.8	22.3
10E06	East Entrance	7000	3/23	24	5.6	10.0	11.3*
9D06	Fisher Creek	9100	3/29	95	34.5	51.4	-
9D06	Fisher Creek Pillow	9100	3/29	SP	34.2	52.3	-
9D05	Grizzly Peak	8400	3/29	64	19.2	20.3	15.7*
10D06	Independence	7850	3/29	57	20.4	24.9	19.2*
10E04	Lake Camp	7850	3/29	28	7.0	14.1	11.1
9E01	Lodgepole	8200	3/29	37	9.9	15.0	11.8
10E01	Lupine Creek	7300	3/31	34	10.2	15.2	11.2
10D18	Maynard Creek	6210	3/29	55	20.4	19.0	-
10D18	Maynard Creek Pillow	6210	3/29	SP	14.2	14.6	-
10D12	Monument Peak	8800	3/29	78	27.8	33.8	23.0
10E02	Norris Basin	7500	3/31	36	12.6	13.6	9.9
10D07	Northeast Entrance	7400	3/28	34	9.8	14.0	9.3
10D07	Northeast Entrance Pillow	7350	3/28	SP	9.6	12.3	-
10C03	Porcupine R. S.	6500	3/28	37	11.0	9.4	7.7
10D10	Sacajawea	6550	4/2	49	18.0	17.2	13.0*
10D16	Shower Falls	8100	4/1	83	32.8	31.8	-
10D16	Shower Falls Pillow	8100	4/1	SP	29.2	27.8	-
10C08	South Fork Shields	8100	3/28	77	27.1	29.6	-
10E05	Sylvan Pass	7100	3/25	45	12.1	15.0	14.9
10E07	Thumb Divide	7900	3/31	57	19.0	26.8	24.2
9D04	Timberline Creek	8850	4/1	57	18.4	23.0	14.1
9D02	West Rosebud	7500	3/27	38	13.5	20.8	-
9D08	White Mill	8700	3/29	78	27.3	36.6	-

SP - Snow pillow observation - water content only.

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
10D11M	Battle Ridge	6020	48	17.6	4/2	14.6	15.2	13.9
10D15M	Bridger Bowl	7250	48	15.8	3/29	15.7	15.5	-
10D07M	Northeast Entrance	7350	48	9.4	3/28	5.3	4.9	6.6

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 11

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	Apr-Sept	1900	101	2370	1877
	YELLOWSTONE RIVER					
1925	Livingston (near)	Apr-Sept	2250	106		2127
	SHIELDS RIVER					
1935	Clyde Park (at)	Apr-Sept	130	132		99.0
	BOULDER RIVER					
2000	Big Timber (at)	Apr-Sept	415	121		343
	STILLWATER RIVER					
2050	Absarokee (near)(25)	Apr-Sept	620	112		552
	CLARKS FORK RIVER					
2075	Chance (at)	Apr-Sept	630	108		583
	CLARKS FORK RIVER					
2085	Edgar (at)	Apr-Sept	660	108	837	609
	ROCK CREEK					
2095	Red Lodge (near)	Apr-Sept	115	112	138	103
	YELLOWSTONE RIVER					
2145	Billings (at)	Apr-Sept	4350	111	5611	3913

(25) Adjusted for storage in Mystic Lake.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
2040	Mystic Lake	20.8	4.0	4.4	4.8
2120	Cooney	27.5	12.5	14.5	13.5**

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

MILK RIVER BASIN

MONTANA

as of

APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Snow cover in the headwaters of the Milk River drainage is about one-half that of last year and 70 percent average.

Runoff is expected to be well below average, but with diversions from the Saint Mary River and water stored in Fresno and Nelson Reservoirs, supplies will be adequate for irrigation demands.

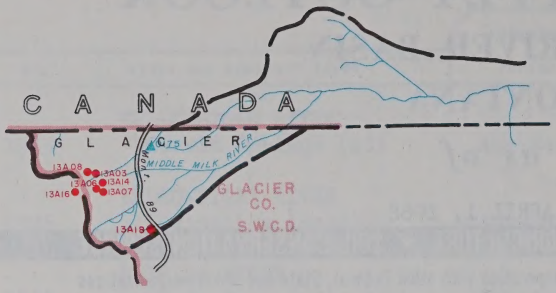
STREAMFLOW (APRIL THROUGH SEPTEMBER)

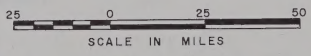
STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
MILK RIVER AT EASTERN CROSSING	304	190	223	312	227	359	232	255	255	230	259	275	217	209	212	250	227	280	332	
RESERVOIR STORAGE SUM FRESNO AND NELSON ON APRIL 1	110	108	24	116	182	115	124	124	132	160	111	129	184	74	53	116	92	67	118	
SUM STREAMFLOW AND RESERVOIR STORAGE	414	298	247	428	409	474	356	279	387	390	370	404	401	283	265	366	319	347	450	

Report prepared by

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
SNOW SURVEY AND WATER SUPPLY FORECASTING UNIT
BOX 98, BOZEMAN, MONTANA 59715

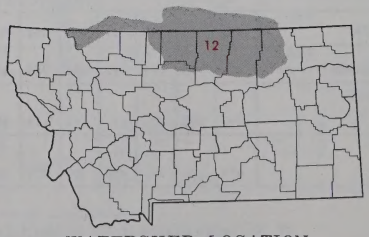
MILK RIVER BASIN





LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED 12

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT LAST YEAR	PAST RECORD: WATER CONTENT AVERAGE
9A02	Bear Paw Ski Area	5200	4/1	24	8.6	-	-
13A18	Hudson Bay Divide	5800	3/29	48	17.2	23.6	19.3*
13A05	Marias Pass	5250	3/28	33	12.6	24.3	20.1
13A16	Mineral Creek	4000				25.4	22.9
9A01	Rocky Boy	4700	4/1	13	4.4	8.4	4.3
9A01	Rocky Boy Pillow	4700	4/1	SP	4.1	-	-
	BOW RIVER - CANADA						
Alb. 1	Bow River	3100	3/25	30	6.7	17.2	9.2
Alb. 2	Upper Pipestone	5300	3/25	28	6.4	17.1	9.1
Alb. 6	Mirror Lake	6600	3/26	40	10.0	21.2	13.1
Alb. 8	Chateau Lawn	5700	3/26	37	9.2	18.8	11.7
Alb. 10	Mount Eisenhower	5000	3/25	14	3.5	8.2	-

SP - Snow pillow observation - water content only.

SOIL MOISTURE DATA

AS OF APRIL 1, 1968

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
13A05M	Marias Pass	5250	54	6.5	4/1	5.7	5.5	5.5

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED 12

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	SAINT MARY RIVER					
0175	Babb (near)(30)	Apr-Sept	410	83		491
	MILK RIVER					
1350	Eastern Crossing (at)	Apr-Sept	210	84		250

(30) Adjusted for storage in Lake Sherburne.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
155	Lake Sherburne	66.1	33.2	21.4	24.4
1365	Fresno	127.2	91.9	134.9	81.5
1550	Nelson	66.8	37.7	49.8	34.9

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
BIG HORN RIVER BASIN
AND YELLOWSTONE RIVER (Billings to Forsyth)
MONTANA
as of
APRIL 1, 1968

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

Snow pack on the north end of the Big Horn Mountains is about the same as last year, but 128 percent average. The Upper Yellowstone drainage has snow pack that is 84 percent of last year and 105 percent average. The Big Horn River drainage snow pack is 91 percent of last year and 103 percent average.

Late season irrigation water from unregulated streams in the Little Big Horn drainage is expected to be near to a little above average.

Streamflow on the Big Horn is forecast below average but irrigation supplies will be provided from Yellowtail Reservoir storage.

The Yellowstone River above the Big Horn is forecast to produce about 20 percent less than last year.

STREAMFLOW (APRIL THROUGH SEPTEMBER)

STREAM GAGING STA.	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1948-62 Average	1963	1964	1965	1966
STATION NO. 2145 YELLOWSTONE RIVER AT BILLINGS	4756	3632	4537	4469	4642	3367	3642	2958	4788	5133	3199	4094	2526	2380	4577	3913	3976	4400	5573	2938
STATION NO. 2870 BIG HORN RIVER NEAR ST. XAVIER	1922	1796	2214	2553	1884	1321	1332	1121	1916	2707	1446	1274	541	956	2177	1677	2053	2158	3105	636
STATION NO. 2905 & 2915 SUM LITTLE BIG HORN RIVER AND LODGE GRASS CREEK	130	90	81	100	104	92	84	112	81	172	95	127	51	48	110	98	195	236	183	80

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BIG HORN RIVER BASIN AND YELLOWSTONE RIVER (Billings to Forsyth)

LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S W C D Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary

WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED 13

AS OF APRIL 1, 1968

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE
7E21	Bald Mountain	9600	3/25	72	24.7	24.4	20.8*
7E20	Beaver Tongue Divide	9200	3/25	70	23.9	24.7	18.9*
7E33	Burgess R. S.	7900	3/26	42	10.8	10.7	8.2*
7E31	Five Springs Falls	7500	4/1	26	8.2	9.6	5.7*
7E30	Medicine Wheel	9000	3/25	59	20.0	18.4	15.8*
7E11	Sibley Lake	8000	3/29	48	13.9	13.7	9.9*
7E10	Steamboat Point	7500	3/29	34	9.9	10.6	7.9*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

WATER SUPPLY FORECASTS

WATERSHED 13

AS OF APRIL 1, 1968

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW	
					LAST YEAR*	AVERAGE
	YELLOWSTONE RIVER					
2145	Billings (at)	Apr-Sept	4350	111	5611	3913
	BIG HORN RIVER					
2870	Saint Xavier (near)(26)	Apr-Sept	1420	85	2969	1677
	LITTLE BIG HORN RIVER					
2920	Lodgegrass (near)(28)	Apr-Sept	125	127		98.4
	YELLOWSTONE RIVER					
3090	Miles City (at)(27)	Apr-Sept	5950	103		5778

(26) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake and Yellowtail Reservoirs.
(27) Adjusted for storage in Buffalo Bill, Boysen and Yellowtail Reservoirs.
(28) Sum Little Big Horn below Pass Creek and Lodgegrass Creek near Wyola.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1968

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
2864	Yellowtail	1,356.0	758.8	698.1	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).